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EXAMINER

YIMAM, HARUN M

ART UNIT PAPER NUMBER

2623

DATE MAILED: 07/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/882,090

Applicant(s)

CONNELLY, JAY H.

Examiner

Harun M. Yimam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-121 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-121 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/18/06 & 5/26/06</u> . | 6) <input type="checkbox"/> Other: _____ |

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Note to Applicant

Art Units 2611, 2614 and 2617 have changed to 2623. Please make all future correspondence indicate the new designation 2623.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/18/2006 has been entered.

Information Disclosure Statement

2. The information disclosure statements (IDS) submitted on 04/18/2006 and 05/26/2006 have been considered by the examiner.

Response to Arguments

3. Applicant's arguments filed 04/18/2006 have been fully considered but are moot in view of new grounds of rejection.

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4. In response to applicant's argument (page 20, 5th paragraph—page 21, 4th paragraph) that Payton fails to disclose ranking broadcast content pieces based on content descriptors **prior** to the content pieces themselves being broadcast, applicant should note that Payton explicitly discloses that a collaborative filtering system 42 synthesizes the subscriber profiles 40, predicts which of the available items 36 (content pieces) each subscriber may be interested in, and produces a list 44 of those recommended items for each subscriber (column 5, lines 12-16). In addition, Payton discloses that the list may comprise only items that a particular subscriber has never previously requested (column 5, lines 16-18). Payton further discloses that the scheduling processor 46 (ranking algorithm) merges the lists 44 of recommended items to prioritize the items 36 (content pieces) from the most to the least frequently recommended **and** places identifiers for these items in a refresh queue 47 for broadcast (column 5, lines 22-26). Therefore, it is clear that the items 36 (content pieces) are ranked **prior** to their broadcast.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1-6, 9-10, 12, 14, 18, 21-25, 31, 34-40, 43, 44, 46, 48, 52, 55-65, 67, 69, 73, 76-85, 87-93, and 95-121 are rejected under 35 U.S.C. 102(b) as being anticipated by Payton (US 5,790,935).

Regarding claim 1, Payton teaches a method, comprising:

receiving broadcast communications including content descriptors via a first communications link from a broadcast source, the content descriptors including descriptions of a plurality of corresponding content pieces being considered for future broadcast (See Col. 2 lines 61-67, Col. 3 lines 1-46 See Col. 5 lines 16-21 List of recommend programs is sent to users, Programs can be on recommended list multiple times "or may contain...a few previously viewed items that the subscriber rated very highly, and is thus likely to request again");

performing a ranking algorithm to rank at least a portion of the plurality of content pieces based at least in part on the content descriptors prior to the broadcast of the content pieces described by the content descriptors (column 5, lines 6-26) to generate a ranking feedback indicating the desirability of the portion of the plurality of content pieces (See Col. 5 lines 6-21) prior to their broadcast (column 5, lines 6-26); and

transmitting the ranking feedback via a second communications link to a remote location (See Col. 6 lines 51-58).

Regarding claim 2, Payton teaches wherein the first communications link and the second communication link comprise a common transmission platform (See Fig. 9 and Col. 4 lines 45-54, Col. 10 lines 21-25).

Regarding claim 3, Payton teaches wherein the first communications link and the second communications link comprise separate transmission platforms (See Fig. 2 and Col. 4 lines 45-54).

Regarding claim 4, Payton teaches wherein the ranking feedback comprises a list of ranked content pieces, and wherein transmitting the ranking feedback comprises periodically transmitting a batch of the ranking feedback to the remote location, the remote location being linked to the broadcast source (See Fig. 6 Col. 5 lines 6-21, Col. 7 lines 61-67, Col. 8 lines 1-10 Updated ranking vector (a list of ranked content pieces) data, is periodically sent to server).

Regarding claim 5, Payton teaches wherein the second communications link comprises a continuous connection to the remote location, the remote location being linked to the broadcast source (See Fig. 2 Col. 4 lines 45-67, Col. 5 lines 1-67, Col. 6 lines 1-58).

Regarding claim 6, Payton teaches wherein the second communications link comprises a connection to the remote location that is initiated to transmit the ranking

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feedback, the remote location being linked to the broadcast source (See Fig. 2 Col. 4 lines 45-67, Col. 5 lines 1-67, Col. 6 lines 1-58).

Regarding claim **9**, Payton teaches a method comprising: receiving broadcast communications including the plurality of content pieces (See Col. 5 lines 66-67); and performing a capture algorithm to selectively determine which, if any, of the content pieces should be cached, and wherein the ranking algorithm is identical to the capture algorithm (See Col. 6 lines 1-12).

Regarding claim **10**, Payton teaches wherein the ranking algorithm includes a consideration of any existing cached data files to generate the ranking feedback (See Col. 6 lines 44-50 Rankings consider viewing history. Viewing history is a cached data file).

Regarding claim **12**, Payton teaches wherein the ranking algorithm includes a consideration of a user's previous viewing habits to generate the ranking feedback (See Col. 5 lines 6-21).

Regarding claim **14**, Payton teaches wherein the ranking algorithm includes a consideration of a user's preferences to generate the ranking feedback (See Col. 5 lines 6-21).

Regarding claim **18**, Payton teaches wherein the ranking algorithm includes a consideration of a review of a content piece provided by an external source to generate the ranking feedback (See Col. 5 lines 6-21 Ranking is based of various users rankings. Each user is an external source to another user).

Regarding claim **21**, Payton teaches the method further comprising: generating a display on a display device that provides a user-interface that enables a user to rank content pieces so as to indicate a ranked level of demand to receive those content pieces if they are broadcast by the broadcast system (See Col. 5 lines 6-21, Col. 6 lines 20-50).

Regarding claim **22**, Payton teaches wherein the user ranks at least a portion of the content pieces (See Col. 6 lines 20-50).

Regarding claim **23**, Payton wherein the ranking algorithm automatically ranks at least a portion of the content pieces (See Col. 9 lines 14-48).

Regarding claim **24**, Payton teaches wherein the ranking algorithm automatically ranks at least a portion of the content pieces that were not ranked by the user (See Col. 6 lines 20-50).

Regarding claim **25**, Payton teaches wherein the ranking algorithm includes a consideration of a user's previous viewing habits to generate the ranking feedback (See Col. 6 lines 44-50).

Regarding claim **27**, Payton teaches wherein the ranking algorithm includes a consideration of a user's preferences to generate the ranking feedback (See Col. 5 lines 7-21, Col. 9 lines 14-61).

Regarding claim **31**, Payton teaches wherein the ranking algorithm includes a consideration of a review of a content piece provided by an external source to generate the ranking feedback (See Col. 5 lines 6-21 Ranking is based of various users rankings. Each user is an external source to another user).

Regarding claim **34**, Payton teaches wherein the ranking algorithm includes a consideration of any existing cached data files to generate the ranking feedback (See Col. 6 lines 44-50 Rankings consider viewing history. Viewing history is a cached data file).

Regarding claim **35**, Payton teaches an apparatus, comprising: a processor (See Fig. 2 Predictive filter 54 and Col. 6 lines 1-50); a memory, coupled to the processor, to store a plurality of machine instructions including a ranking algorithm (See Fig. 2 and Col. 6 lines 1-50); a storage device, coupled to the processor, to store content pieces

(See Fig. 2 Local Storage 56 and Col. 6 lines 1-50); and a communications interface, coupled to the processor, which enables the apparatus to receive broadcast communications from a broadcast source via a first communications link (See Fig. 2 Local receiver 52 and Col. 5 lines 55-67), and to send ranking feedback to the broadcast source via a second communications link (See Fig. 2 Back channel 30 and Col. 4 lines 45-55), the broadcast communications including a plurality of content descriptors that describe a plurality of corresponding content pieces available for future broadcast (See Col. 2 lines 61-67, Col. 3 lines 1-46 See Col. 5 lines 16-21 List of recommend programs is sent to users, Programs can be on recommended list multiple times "or may contain...a few previously viewed items that the subscriber rated very highly, and is thus likely to request again); and wherein execution of the machine instructions by the processor causes the apparatus to receive the content descriptors as they are broadcast, to perform the ranking algorithm based at least in part on the content descriptors prior to the broadcast of the content pieces described by the content descriptors (column 5, lines 6-26) to generate the ranking feedback, the ranking feedback indicating desirability of at least a portion of the plurality of content pieces, and to transmit the ranking feedback to the broadcast source (See Col. 2 lines 61-67, Col. 3 lines 1-46, Col. 6 lines 1-58) prior to broadcast of the corresponding content pieces (column 5, lines 6-26).

Regarding claim 36, Payton teaches wherein transmitting the ranking feedback to the broadcast source comprises periodically transmitting the ranking feedback as a

batch of ranked content pieces via the communications interface (See Fig. 6 Col. 5 lines 6-21, Col. 7 lines 61-67, Col. 8 lines 1-10 Updated ranking vector (a list of ranked content pieces) data, is periodically sent to server).

Regarding claim **37**, Payton teaches wherein the first communications link and the second communications link comprise a common transmission platform (See Fig. 9 and Col. 4 lines 45-54, Col. 10 lines 21-25).

Regarding claim **38**, Payton teaches wherein the first communications link and the second communications link comprise separate transmission platforms (See Fig. 2 and Col. 4 lines 45-54).

Regarding claim **39**, Payton teaches wherein the communications interface maintains a continuous connection to a remote location to transmit the ranking feedback, the remote location being linked to the broadcast source (See Col. 6 lines 51-58 A twisted-pair network is a continuous connection).

Regarding claim **40**, Payton teaches wherein the communications interface initiates a connection to a remote location via a communications link to transmit the ranking feedback, the remote location being linked to the broadcast source (See Col. 7 lines 61-67, Col. 8 lines 1-10 Local server dials up distribution server. Dialing up is initiating connection).

Regarding claim **43**, Payton teaches wherein the plurality of machine instructions further include a capture algorithm, which, when executed by the processor, causes the apparatus to selectively determine which, if any, of the content pieces should be stored in the storage device, and wherein the ranking algorithm is identical to the capture algorithm (See Col. 6 lines 1-9).

Regarding claim **44**, Payton teaches wherein at least one content piece is cached in the storage device, and the ranking algorithm considers the at least one content piece that is cached when generating the ranking feedback (See Col. 6 lines 33-34).

Regarding claim **46**, Payton teaches wherein the memory stores data pertaining to a user's previous viewing habits, and the ranking algorithm includes a consideration of the user's previous viewing habits to generate the ranking feedback (See Col. 5 lines 6-21, Col. 6 lines 20-50).

Regarding claim **48**, Payton teaches wherein the memory stores data pertaining to a user's preferences, and the ranking algorithm includes a consideration of the user's preferences to generate the ranking feedback (See Col. 5 lines 6-21).

Regarding claim **52**, Payton teaches wherein the content descriptors include data pertaining to a review of a content piece provided by an external source, and the

ranking algorithm includes a consideration of the review to generate the ranking feedback (See Col. 5 lines 6-21 Ranking is based of various users rankings. Each user is an external source to another user).

Regarding claim **55**, Payton teaches wherein the apparatus further includes a video subsystem having an output that generates a display on a display device when the display device is connected to the output, and wherein execution of the plurality of machine instructions by the processor causes the apparatus to provide a user-interface that enables a user to rank content pieces to indicate a ranked level of demand to receive those content pieces if they are broadcast by the broadcast system (See Fig. 2 Playback Device 32 Col. 5 lines 6-21, Col. 6 lines 20-50).

Regarding claim **56**, Payton teaches wherein the user ranks at least a portion of the content pieces (See Col. 6 lines 20-50).

Regarding claim **57**, Payton teaches wherein the ranking algorithm automatically ranks at least a portion of the content pieces (See Col. 6 lines 20-50).

Regarding claim **58**, Payton teaches wherein the ranking algorithm automatically ranks at least a portion of the content pieces that were not ranked by the user (See Col. 6 lines 20-50).

Regarding claim **59**, Payton teaches an article of manufacture, comprising: a machine-readable medium that provides instructions which, when executed by a machine, cause the machine to: receive broadcast communications including content descriptors via a first communications link from a broadcast source, the content descriptors including descriptions of a plurality of corresponding content pieces for possible future broadcast (See Col. 5 lines 5-67 Server Broadcasts Lists of items to clients. The lists inherently include identifiers of items. Identifiers are content descriptors); perform a ranking algorithm to rank at least a portion of the plurality of content pieces based at least in part on the content descriptors prior to the broadcast of the content pieces described by the content descriptors (column 5, lines 6-26) to generate a ranking feedback indicating desirability of the portion of the plurality of content pieces (See Col. 4 lines 45-67, Col. 5 lines 1-67, Col. 6 lines 1-58) prior to their broadcast (column 5, lines 6-26); and transmit the ranking feedback via a second communications link to a remote location (Col. 5 lines 55-67, Col. 6 lines 1-58).

Regarding claim **60**, Payton teaches wherein the first communications link and the second communication link comprise a single transmission platform (See Fig. 9 and Col. 4 lines 45-54, Col. 10 lines 21-25).

Regarding claim **61**, Payton teaches wherein the first communications link and the second communications link comprise separate transmission platforms (See Fig. 2 and Col. 4 lines 45-54).

Regarding claim **62**, Payton teaches wherein the ranking feedback comprises a list of ranked content pieces, and wherein transmitting the ranking feedback comprises periodically transmitting a batch of the ranking feedback to the remote location, the remote location being linked to the broadcast source (See Fig. 6 Col. 5 lines 6-21, Col. 7 lines 61-67, Col. 8 lines 1-10 Updated ranking vector (a list of ranked content pieces) data, is periodically sent to server).

Regarding claim **63**, Payton teaches wherein the second communications link comprises a continuous connection to the remote location, the remote location being linked to the broadcast source (See Col. 6 lines 51-58 A twisted-pair network is a continuous connection).

Regarding claim **64**, Payton teaches wherein the second communications link comprises a connection to the remote location that is initiated to transmit the ranking feedback, the remote location being linked to the broadcast source (See Col. 7 lines 61-67, Col. 8 lines 1-10 Local server dials up distribution server. Dialing up is initiating connection).

Regarding claim **65**, Payton teaches wherein the ranking algorithm includes a consideration of any existing cached data files to generate the ranking feedback (See Col. 6 lines 44-50 Rankings consider viewing history. Viewing history is a cached data file).

Regarding claim **67**, Payton teaches wherein the ranking algorithm includes a consideration of a user's previous viewing habits to generate the ranking feedback (See Col. 5 lines 6-21, Col. 6 lines 44-50).

Regarding claim **69**, Payton teaches wherein the ranking algorithm includes a consideration of a user's preferences to generate the ranking feedback (See Col. 5 lines 6-21).

Regarding claim **73**, Payton teaches wherein the ranking algorithm includes a consideration of a review of a content piece provided by an external source to generate the ranking feedback (Ranking is based of various users rankings. Each user is an external source to another user).

Regarding claim **76**, Payton teaches wherein execution of the instructions by the machine, further cause the machine to generate a display on a display device to provide a user-interface that enables a user to rank content pieces to indicate a ranked level of demand to receive those content pieces if they are broadcast by the broadcast system (See Fig. 2 Playback Device 32 Col. 5 lines 6-21, Col. 6 lines 20-50).

Regarding claim **77**, Payton teaches wherein the user ranks at least a portion of the content pieces (See Col. 6 lines 20-50).

Regarding claim **78**, Payton teaches wherein the ranking algorithm automatically ranks at least a portion of the content pieces (See Col. 6 lines 20-50).

Regarding claim **79**, Payton teaches wherein the ranking algorithm automatically ranks at least a portion of the content pieces that were not ranked by the user (See Col. 6 lines 20-50).

Regarding claim **80**, Payton teaches a method, comprising: broadcasting broadcast communications including content descriptors from a broadcast source to a plurality of client systems via a first communications link, the content descriptors including descriptions of a plurality of content pieces being considered for future broadcast (See Col. 5 lines 5-67 Server Broadcasts Lists of items to clients. The lists inherently include identifiers of items. Identifiers are content descriptors); receiving a ranking feedback from the plurality of client systems via a second communications link, wherein the ranking feedback comprises a ranking of at least a portion of the plurality of content pieces based at least in part on the content descriptors broadcasted to the plurality of client systems (See Fig. 2 and Col. 4 lines 46-67, Col. 5 lines 1-67, Col. 6 lines 1-58), wherein the ranking feedback corresponding to at least one of the plurality of content pieces is received prior to broadcasting the at least one of the plurality of content pieces (column 5, lines 6-26).

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Regarding claim **81**, Payton teaches wherein the ranking feedback comprises a list of ranked content pieces, and wherein receiving the ranking feedback comprises periodically receiving the ranking feedback as a batch of ranked content pieces from each the plurality of client systems (See Fig. 6 Col. 5 lines 6-21, Col. 7 lines 61-67, Col. 8 lines 1-10 Updated ranking vector (a list of ranked content pieces) data, is periodically sent to server).

Regarding claim **82**, Payton teaches wherein the first communications link and the second communications link comprise a common transmission platform (See Fig. 9 and Col. 4 lines 45-54, Col. 10 lines 21-25).

Regarding claim **83**, Payton teaches wherein the first communications link and the second communications link comprise separate transmission platforms (See Fig. 2 and Col. 4 lines 45-54).

Regarding claim **84**, Payton teaches wherein the second communications link comprises a continuous connection from each of the plurality of client systems for receiving the ranking feedback (See Col. 6 lines 51-58 A twisted-pair network is a continuous connection).

Regarding claim **85**, Payton teaches wherein the second communications link comprises a connection initiated by each of the plurality of client systems (See Col. 7

lines 61-67, Col. 8 lines 1-10 Local server dials up distribution server. Dialing up is initiating connection).

Regarding claim **87**, Payton teaches wherein the ranking of at least a portion of the plurality of content pieces is generated via a ranking algorithm (See Col. 6 lines 20-50).

Regarding claim **88**, Payton teaches wherein the ranking feedback includes user ranking of content pieces to indicate a ranked level of demand to receive those content pieces if they are broadcast by the broadcast system (See Col. 6 lines 20-50).

Regarding claim **89**, Payton teaches wherein the ranking feedback is received from each of the plurality of client systems independently (See Col. 5 lines 6-21, Col. 7 lines 61-67, Col. 8 lines 1-10, Each local server transmits its rating data to distribution server).

Regarding claim **90**, Payton teaches a broadcast system, comprising: a server (See Fig. 2 Server 24 and Col. 4 lines 45-54); and at least one communications link to transmit broadcast communications including content descriptors to a plurality of client systems, the content descriptors including descriptions of a plurality of corresponding content pieces available for future broadcast (See Col. 5 lines 5-67 Server Broadcasts Lists of items to clients. The lists inherently include identifiers of items. Identifiers are

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content descriptors), and to transmit a ranking feedback from each of the plurality of client systems to the server, wherein the ranking feedback comprises a ranking of at least a portion of the plurality of content pieces based at least in part on the content descriptors broadcasted to the plurality of client systems (See Fig. 6, Col. 5 lines 6-67, Col. 7 lines 61-67, Col. 8 lines 1-10 Ranking vectors are rankings of a portion content pieces), wherein the ranking feedback corresponding to at least one of the plurality of content pieces is received prior to broadcasting the at least one of the plurality of content pieces (column 5, lines 6-26).

Regarding claim **91**, Payton teaches wherein the ranking feedback is transmitted periodically as a batch of ranked content pieces via the at least one communications link from each of the plurality of client systems to the server (See Fig. 6 Col. 5 lines 6-21, Col. 7 lines 61-67, Col. 8 lines 1-10 Updated ranking vector (a list of ranked content pieces) data, is periodically sent to server).

Regarding claim **92**, Payton teaches wherein the at least one communications link comprises a continuous connection to transmit ranking feedback from the plurality of client systems to the server (See Col. 6 lines 51-58 A twisted-pair network is a continuous connection).

Regarding claim **93**, Payton teaches wherein the at least one communications link comprises a connection from each of the plurality of client systems to the server that

is initiated to transmit the ranking feedback (See Col. 7 lines 61-67, Col. 8 lines 1-10
Local server dials up distribution server. Dialing up is initiating connection).

Regarding claim **95**, Payton teaches wherein the ranking of at least a portion of the plurality of content pieces is generated via a ranking algorithm (See Col. 6 lines 20-50).

Regarding claim **96**, Payton teaches wherein the ranking feedback includes user ranking of content pieces to indicate a ranked level of demand to receive those content pieces if they are broadcast by the broadcast system (See Col. 6 lines 20-50).

Regarding claim **97**, Payton teaches wherein the ranking feedback is transmitted independently from each of the plurality of client systems to the server (See Col. 5 lines 6-21, Col. 7 lines 61-67, Col. 8 lines 1-10, Each local server transmits its rating data to distribution server).

Regarding claim **98**, Payton teaches an article of manufacture, comprising: a machine-readable medium that provides instructions which, when executed by a machine, cause the machine to: broadcast communications including content descriptors from a broadcast source to a plurality of client systems via a first communications link, the content descriptors including descriptions of a plurality of content pieces for future broadcast (See Col. 5 lines 5-67 Server Broadcasts Lists of

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items to clients. The lists inherently include identifiers of items. Identifiers are content descriptors); receive a ranking feedback from the plurality of client systems via a second communications link, wherein the ranking feedback comprises a ranking of at least a portion of the plurality of content pieces based at least in part on the content descriptors broadcasted to the plurality of client systems (See Fig. 6 Col. 5 lines 6-67, Col. 7 lines 61-67, Col. 8 lines 1-10 Ranking vectors are rankings of a portion content pieces), wherein the ranking feedback corresponding to at least one of the plurality of content pieces is received prior to broadcasting the at least one of the plurality of content pieces (column 5, lines 6-26).

Regarding claim **99**, Payton teaches wherein the ranking feedback comprises a list of ranked content pieces, and wherein receiving the ranking feedback comprises periodically receiving the ranking feedback as a batch of ranked content pieces from each of the plurality of client systems (See Fig. 6 Col. 5 lines 6-21, Col. 7 lines 61-67, Col. 8 lines 1-10 Updated ranking vector (a list of ranked content pieces) data, is periodically sent to server).

Regarding claim **100**, Payton teaches wherein the first communications link and the second communications link comprise a common transmission platform (See Fig. 9 and Col. 4 lines 45-54, Col. 10 lines 21-25).

Regarding claim **101**, Payton teaches wherein the first communications link and the second communications link comprise separate transmission platforms (See Fig. 2 and Col. 4 lines 45-54).

Regarding claim **102**, Payton teaches wherein the second communications link comprises a continuous connection from each of the plurality of client systems for receiving the ranking feedback (See Col. 6 lines 51-58 A twisted-pair network is a continuous connection).

Regarding claim **103**, Payton teaches wherein the second communications link comprises a connection initiated by each of the plurality of client systems (See Col. 7 lines 61-67, Col. 8 lines 1-10 Local server dials up distribution server. Dialing up is initiating connection).

Regarding claim **104**, Payton teaches wherein the ranking of at least a portion of the plurality of content pieces is generated via a ranking algorithm (See Col. 6 lines 20-50).

Regarding claim **105**, Payton teaches wherein the ranking feedback includes user ranking of content pieces to indicate a ranked level of demand to receive those content pieces if they are broadcast by the broadcast system (See Col. 6 lines 20-50).

Regarding claim **106**, Payton teaches a system comprising: a server (See Fig. 2 Server 24 and Col. 4 lines 45-54); at least one communications link (See Fig. 2 and Col. 4 lines 45-54); and a client system, the client system including a processor and a memory to store a ranking algorithm (See Fig. 2 Local Server 28 Col. 6 lines 1-50); and wherein a plurality of content descriptors are transmitted via the at least one communications link to the client system, the plurality of content descriptors including descriptions of a plurality of content pieces being considered for future broadcast to the client system (See Col. 5 lines 5-67 Server Broadcasts Lists of items to clients. The lists inherently include identifiers of items. Identifiers are content descriptors); the processor implements the ranking algorithm to rank at least a portion of the plurality of content pieces based at least in part on the plurality of content descriptors to generate a ranking feedback (See Col. 4 lines 45-67, Col. 5 lines 1-67, Col. 6 lines 1-58) prior to the broadcast of the content pieces described by the content descriptors (column 5, lines 6-26); and the ranking feedback is transmitted via the at least one communications link to the server (See Col. 6 lines 51-58).

Regarding claim **107**, Payton teaches wherein the ranking feedback is transmitted periodically via the at least one communications link to the server as a batch of ranked content pieces (See Fig. 6 Col. 5 lines 6-21, Col. 7 lines 61-67, Col. 8 lines 1-10 Updated ranking vector (a list of ranked content pieces) data, is periodically sent to server).

Regarding claim **108**, Payton teaches wherein the ranking feedback includes user ranking of the content pieces (See Col. 6 lines 36-50).

Regarding claim **109**, Payton teaches wherein the ranking feedback includes automated ranking of the content pieces (See Col. 6 lines 36-50 Storing programs based on viewing habits is automatically ranking content piece).

Regarding claim **110**, Payton teaches wherein the ranking feedback includes user ranking of the content pieces and automated ranking of the content pieces (See Col. 5 lines 6-21, Col. 7 lines 61-67, Col. 8 lines 1-10, Each local server transmits its rating data to distribution server).

Regarding claim **111**, Payton teaches wherein the at least one communications link comprises a continuous connection to transmit the ranking feedback to the server (See Col. 6 lines 51-58 A twisted-pair network is a continuous connection).

Regarding claim **112**, Payton teaches wherein the at least one communications link comprises a connection initiated by the client system to transmit the ranking feedback to the server (See Col. 7 lines 61-67, Col. 8 lines 1-10 Local server dials up distribution server. Dialing up is initiating connection).

Regarding claim **113** Payton teaches a method, comprising: broadcasting content descriptors from a server to at least one client system via at least one communications link, the content descriptors including descriptions of a plurality of corresponding content pieces being considered for future broadcast to the at least one client system (See Col. 5 lines 5-67 Server Broadcasts Lists of items to clients. The lists inherently include identifiers of items. Identifiers are content descriptors); receiving the content descriptors at the at least one client system (See Col. 5 lines 5-67); ranking at least a portion of the plurality of content pieces based at least in part on the content descriptors prior to the broadcast of the content pieces described by the content descriptors (column 5, lines 6-26) to generate a ranking feedback (See Col. 6 lines 1-58); and communicating the ranking feedback to the server via the at least one communications link (See Col. 6 lines 51-58) prior to the broadcast of the content pieces described by the content descriptors (column 5, lines 6-26).

Regarding claim **114**, Payton teaches the method further comprising: processing the ranking feedback to generate an aggregate representation of the feedback from the at least one client system (See Col. 5 lines 6-21); and selecting a portion of the plurality of content pieces to be sent to the at least one client system in response to the aggregate representation of the feedback (See Col. 5 lines 6-45).

Regarding claim **115**, Payton teaches wherein communicating the ranking feedback to the server comprises periodically communicating a batch of ranking

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feedback (See Fig. 6 Col. 5 lines 6-21, Col. 7 lines 61-67, Col. 8 lines 1-10 Updated ranking vector (a list of ranked content pieces) data, is periodically sent to server).

Regarding claim **116**, Payton teaches wherein the at least one communications link comprises a continuous connection for communicating the ranking feedback to the server (See Col. 6 lines 51-58 A twisted-pair network is a continuous connection).

Regarding claim **117**, Payton teaches wherein the at least one communications link comprises a connection initiated by the at least one client system for communicating the ranking feedback to the server (See Col. 7 lines 61-67, Col. 8 lines 1-10 Local server dials up distribution server. Dialing up is initiating connection).

Regarding claim **118**, Payton teaches wherein the ranking feedback includes user ranking of the content pieces (See Col. 6 lines 36-50).

Regarding claim **119**, Payton teaches wherein the ranking feedback includes automated ranking of the content pieces (See Col. 6 lines 36-50 Storing programs based on viewing habits is automatically ranking content piece).

Regarding claim **120**, Payton teaches wherein the ranking feedback includes user ranking of the content pieces and automated ranking of the content pieces (See Col. 6 Items are ranked on users scores or on viewing habits).

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Regarding claim **121**, Payton teaches wherein the ranking feedback is communicated from each at least one client system to the server independently (See Col. 5 lines 6-21, Col. 7 lines 61-67, Col. 8 lines 1-10, Each local server transmits its rating data to distribution server).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims **7** and **41** are rejected under 35 U.S.C. 103(a) as being unpatentable over Payton in view of Kawaguchi (US 6,271,893).

Regarding claim **7**, Payton fails to disclose wherein the broadcast communications include a schedule for the content descriptors that is received prior to receiving the content descriptors, the schedule providing information pertaining to when the content descriptors may be received. However, it is well known in the art to have broadcast communications include a schedule for the content descriptors that is received prior to receiving the content descriptors, the schedule providing information pertaining to when the content descriptors may be received as taught by Kawaguchi

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(See Col. 5 lines 20-44). Thus, in view of the teachings of Kawaguchi it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Payton so that the broadcast communications included a schedule for the content descriptors that was received prior to receiving the content descriptors, the schedule providing information pertaining to when the content descriptors may be received to ensure the reception of program information while conserving power (See Kawaguchi Col. 1 lines 49-53).

Regarding claim **41**, Payton fails to disclose wherein the broadcast communications includes a schedule for the content descriptors that is broadcast prior to sending the content descriptors, and is received via the communications interface, and wherein execution of the plurality of machine instructions further causes the apparatus to prepare for receiving the broadcast of the content descriptors based on the schedule to enable the apparatus to receive the content descriptors when they are broadcast. However, it is well known in the art to have broadcast communications include a schedule for the content descriptors that is received prior to receiving the content descriptors, the schedule providing information pertaining to when the content descriptors may be received as taught by Kawaguchi (See Col. 5 lines 20-44). Thus, in view of the teachings of Kawaguchi it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Payton so that the broadcast communications included a schedule for the content descriptors that was received prior to receiving the content descriptors, the schedule providing information pertaining to

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enable the apparatus to receive the content descriptors when they are broadcast to ensure the reception of program information while conserving power (See Kawaguchi Col. 1 lines 49-53).

9. Claims **8, 42, 86, and 94** are rejected under 35 U.S.C. 103(a) as being unpatentable over Payton in view of Perlman et al (US 5,853,576).

Regarding claim **8, 42, 86, and 94**, Payton fails to disclose wherein the content descriptors comprise a continuous stream of data that may be tapped into at any time. However, it is well known in the art to provide content descriptors through a continuous stream that may be tapped into at any time as taught by Perlman (See Col. 5 lines 52-62). Thus, in view of the teachings of Perlman, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Payton so that the content descriptors comprise a continuous stream of data that may be tapped into at any time to allow content descriptors to be continuously updated.

10. Claims **11, 45, and 66** are rejected under 35 U.S.C. 103(a) as being unpatentable over Payton in view of Urakoshi et al (US 6,067,564).

Regarding claims **11, 45, and 66**, Payton differs from the claimed invention in that Payton fails to disclose wherein the content descriptors include data pertaining to a revenue-generating potential of at least a portion of the content pieces, and the ranking

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algorithm includes a consideration of the content piece's revenue generating potential when generating the ranking feedback. However, it is well known in the art to include data pertaining to a revenue-generating potential of at least a portion of the content pieces, and the ranking algorithm includes a consideration of the content piece's revenue generating potential when generating the ranking feedback as taught by Urakoshi (See Fig. 16 and Col. 9 lines 15-64 Ordering content pieces according to price is considering content based on revenue generating potential). Thus, in view of the teachings of Urakoshi, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Payton so that the ranking algorithm included a consideration of the future broadcast schedule of a program to provide a way to sort programs (See Urakoshi Col. 9 lines 15-64).

11. Claims **13, 15, 16, 26, 28, 29, 47 49, 50, 68, 70** and **71** are rejected under 35 U.S.C. 103(a) as being unpatentable over Payton in view of Inoue (US 6,185,360).

Regarding claims **13, 26, 47** and **68**, Payton differs from these claims in that the ranking algorithm does not necessarily include a consideration of a content piece's size to generate the ranking feedback. However, it is will known in the art to compare content pieces based on the size of the pieces as shown in Inoue (See Col. 12 lines 12-49). Thus, in view of the teaches of Inoue, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Payton to consider

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content pieces sizes when generating ranking feedback, to resolve conflicts when there is not enough storage capacity to store both pieces (See Inoue Col. 12 lines 12-49).

Regarding claims **15, 28, 49, and 70**, Payton differs from these claims in that Payton fails to disclose wherein the content descriptors include data pertaining to an availability window corresponding to a content piece, and the ranking algorithm includes a consideration of the availability window to generate the ranking feedback. However, it is well known in the art to have content descriptors include data pertaining to an availability window corresponding to a content piece, and to consider the availability window when ranking pieces as taught by Inoue (See Col. 9 lines 7-23, Specific information includes information about whether distribution time is fixed or not (availability window). Specific information is compared to prioritize programs). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Payton so that the ranking algorithm included a consideration of the availability window to generate the ranking feedback to provide an additional way to prioritize programs.

Regarding claims **16, 29, 50, and 71**, Payton differs from these claims in that Payton fails to disclose wherein the ranking algorithm includes a consideration of a future broadcast schedule to generate the ranking feedback. However, it is well known in the art to consider the future broadcast schedule when ranking pieces as taught by Inoue (See Col. 9 lines 7-23, Col. 11 lines 21-42). Thus, it would have been obvious to

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one of ordinary skill in the art at the time the invention was made to modify Payton so that the ranking algorithm included a consideration of the future broadcast schedule of a program to generate the ranking feedback to provide an additional way to prioritize programs.

12. Claims **20, 33, 54, and 75** are rejected under 35 U.S.C. 103(a) as being unpatentable over Payton in view of Herz (US 5,754,938).

Regarding claims **20, 33, 54, and 75**, Payton differs from these claims in that Payton fails to disclose wherein the memory stores data pertaining to a user's age, and the ranking algorithm includes a consideration of the user's age to generate the ranking feedback. However, it is well known to consider the user's age to generate the ranking feedback as taught by Herz (See Col. 20 lines 9-39). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Payton to store data pertaining to a user's age, and to have the ranking algorithm include a consideration of the user's age to generate the ranking feedback to efficiently organize information (See Herz Abstract).

13. Claims **17, 30, 51, and 72** are rejected under 35 U.S.C. 103(a) as being unpatentable over Payton in view of McCoy et al (US 6,526,575).

Regarding claims **17, 30, 51, and 72**, Payton differs from the claimed invention in that Payton fails to wherein the content descriptors include data pertaining to a content piece's past revenue performance, and the ranking algorithm includes a consideration of the content piece's past revenue performance to generate the ranking feedback. However, it is well known in the art to consider past revenue performance when ranking content pieces as taught by McCoy (See Col. 9 lines 23-38). Thus, in view of McCoy, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Payton so that the content descriptors included data pertaining to a content piece's past revenue performance, and the ranking algorithm included a consideration of the content piece's past revenue performance to generate the ranking feedback to provide another factor to use when ranking content.

14. Claims **19, 32, 53, and 74** are rejected under 35 U.S.C. 103(a) as being unpatentable over Payton in view of Ismail et al. (US 6,614,987).

Regarding claims **19, 32, 53, and 74** Payton fails to disclose wherein the content descriptors include data pertaining to a content piece's duration, and the ranking algorithm includes a consideration of the content piece's duration to generate the ranking feedback. However, it is well known in the art to have content descriptors include data pertaining to a content piece's duration, and to consider the content piece's duration to generate the ranking feedback as taught by Ismail (See Col. 8 lines 21-37). Thus, in view of the teachings of Ismail, it would have been obvious to one of ordinary

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skill in the art at the time the invention was made to modify Payton to have the content descriptors include data pertaining to a content piece's duration, and the ranking algorithm includes a consideration of the content piece's duration to generate the ranking feedback to provide another factor to use when ranking content.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harun M. Yimam whose telephone number is 571-272-7260. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on 571-272-7294. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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